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ABSTRACT

This study was intended as a pilot project to design a method and computerized system for collecting, analyzing, and reporting information about the degree to which students in career occupational programs achieve their objective of attaining marketable skills. First, the 4,895 students enrolled in the 52 career education programs at Miami-Dade Community College in 1972-73 were carefully screened on the basis of several different criteria to arrive at a survey population of 2,039. A total of 1,312 of these were matched with Department of Commerce employment records and the records of a previous graduate survey to obtain a printout of employer names and addresses, weeks worked, and earnings. To collect program evaluation data, two basic survey instruments were designed and mailed to former students with predetermined employment address information, and to those without such information. In addition, 915 surveys were mailed to the employers of respondents who had given or implied consent for their employers to be surveyed. In general, respondents to both the student and employer surveys gave favorable ratings to the career programs and to the academic and career preparation given to students at Miami-Dade. Tables of survey data are included, and the methodological limitations of this type of study are discussed. (MHM)

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AN EMPLOYMENT STUDY OF MIAMI-DADE COMMUNITY COLLEGE 1972-1973 CAREER EDUCATION STUDENTS AND THEIR EMPLOYERS

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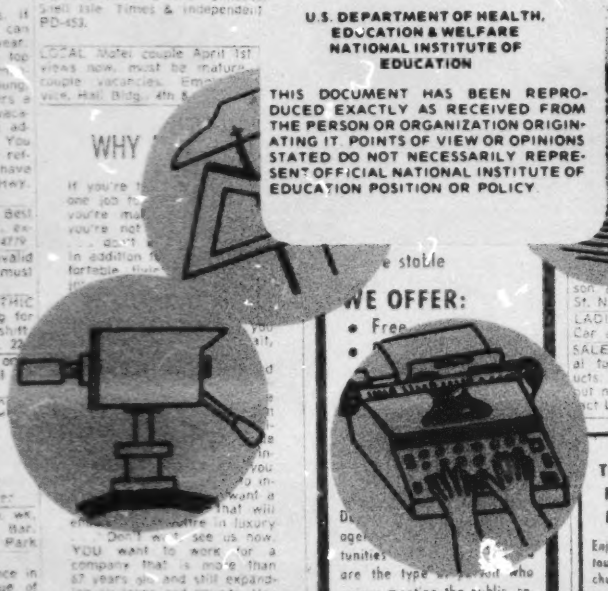

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AN EMPLOYMENT STUDY OF MIAMI-DADE COMMUNITY COLLEGE 1972-73 CAREER EDUCATION STUDENTS AND THEIR EMPLOYERS

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We would also like to acknowledge the contributions

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Section 1

BACKGROUND OF THE STUDY AND PURPOSES

Miami-Dade Community College is a publically-supported two-year college which offers a variety of educational opportunities to participating students. This large multi-campus community college enrolled some 28,025 credit students in its instructional program during the fall of 1972, with 13,072 students in college parallel, 4,652 students in career-occupational, 1,795 students in allied health, and 8,056 students in general and special programs.

This study focuses on an evaluation of the career-occupational programs--52 two-year technical/vocational, business, and occupational education programs--in terms of feedback from former students and their employers.

Little objective information concerning the employment of former students in occupational programs is available from previous college-wide research, since earlier studies have barely touched on this area. Even when the area of employment has been touched upon in previous studies, the focus has been only on graduates, rather than on <u>all</u> students who enroll in these programs. Little attention has been given to the contribution of the College program in assisting these former students to obtain marketable skills.

Within the College, it has long been recognized that there is a need for objective information from former students in occupational programs and from their employers concerning the degree to which the College has assisted the

students in achieving marketable skills.

It can be asserted that the collection of data in educational institutions is generally directed towards the accountability for expenditures rather tha the accountability for attaining objectives. The public is becoming less and less inclined to accept data on such resources as facilities, staff, and materials as evidence of the value of educational programs.

Cognizant of this trend, the present study was designed to determine the degree to which: 1) M-DCC is meeting its stated objectives for career-occupational programs, 2) students in career-occupational programs attain their objectives of achieving marketable skills for employment and profit from their experiences at M-DCC, and 3) former students and their employers rate the College contribution in preparing students for employment.

The purposes of this study may be further operationally defined as having provided some answers to the following questions:

1. How do former students rate the preparation for employment provided by the educational program at Miami-Dade Community College?
2. How do employers of former students rate the preparation for employment provided by the educational program at Miami-Dade Community College?
3. To what extent did the students feel their

M-DCC career program helped them in terms of employment, promotion opportunities, and job satisfaction?

4. What income levels have former students achieved?
5. Are there differences in income level and job satisfaction between program graduates and non-graduates?
6. Did the students gain stable employment in a job related or unrelated to their field of study?
7. To what extent do former students indicate involvement in activities other than gainful employment, such as becoming a full-time homemaker or pursuing further education elsewhere in the same or different fields?
8. To what extent do former students who had taken only a limited number of courses (30 credits or less) to gain additional knowledge or skills in their work consider themselves as having profited from their educational experiences at Miami-Dade Community College?

In addition, a major purpose of this study was to determine the kinds of follow-up data that could be obtained, to develop an efficient system for collecting and analyzing these data, and to report information useful for management decisions.

Section 2

METHODS AND PROCEDURES

A special computer-based tape file was designed and created for this project with appropriate data elements extracted from the College student records system. Provision was made for adding additional data to the file as it was collected for the study. This file provided one record for each former student with all of the data elements related to the study which, in turn, provided the source for later tabulation and analysis of the descriptive variables in conjunction with the surveys.

The method for selecting subjects for this survey is illustrated in Figure 1, page 5. From the total of 4,895 students enrolled in the College in career education programs in the fall of 1972, a selection was made to delete those students who either changed to an educational program other than career education and/or continued their education at the College after the 1972-73 academic year. This procedure left a total of 2,284 students who did not re-enroll at the College after the 1972-73 academic year.

A second selection was made to delete from the sample those students with out-of-country mailing addresses, those without current addresses, and those who withdrew from the College during the fall term of 1972 without having earned any credit (as indicated by student records with credit hours attempted = 0). This procedure reduced the survey sample to a final total of 2,039 students.

From the method of sample selection, it may be seen

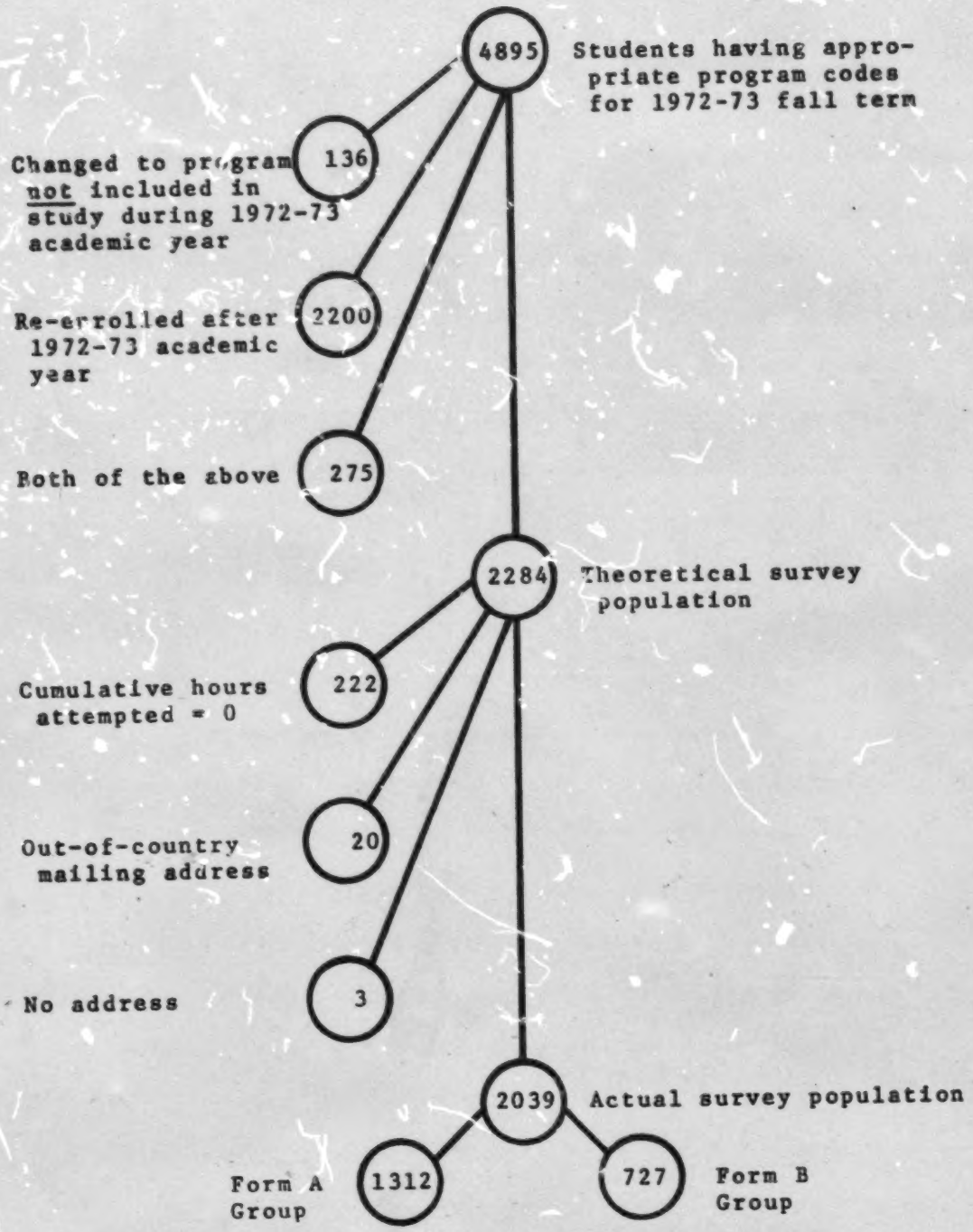


Figure 1--Population description. Numbers in the circles represent actual numbers of former students and the method of selecting them for inclusion in the survey population.

that an important feature of the design of this study was that it yields a partial cross-sectional glimpse of what happens to career-occupational students from a given fall term who did not continue their enrollment at the College beyond the 1972-73 academic year. The study was considered only partially cross-sectional because it involved only those students who did not re-enroll. This approach was selected in order to provide the most current information from former students and their employers on the degree to which partial or full completion of their career-occupational programs aided them in reaching toward career goals. One of the limitations of the partial cross-sectional design used in this study was that the results do not provide any basis for estimating student retention or graduation rates, and no such inferences should be drawn from these results.

Portions of the computer tape records of those students with Social Security Numbers were extracted and a second tape created in a format specified by the Florida Department of Commerce. This second tape was forwarded to the Department of Commerce and matched against the employer quarterly reports for the second, third, and fourth quarters of 1973 and the first and second quarters of 1974.

From this records match, a printout of employment data was obtained on each of the former students so matched. The printout included employer name(s) and address(es), weeks worked, and earnings for each quarter.

Of the 1,817 student records sent to the Department of Commerce, a total of 1,279 or 70.4 percent were matched with employment records. These students were designated as the Form A Group in Figure 1. Employer names and addresses, plus student earnings data, were input to the magnetic tape records for each matched student for later processing, including the generation of employer name and address labels. Employer name and address records for an additional 33 students were extracted from records of a previous College survey of graduates, and their records of employers were added to the magnetic tape records. The addition of these 33 students to the 1,279 from the match with Department of Commerce records brought the Form A Group total to 1,312, as indicated in Figure 1.

The unmatched records from the second tape were merged with those of students without Social Security Numbers, and these students were designated as the Form B Group in Figure 1, indicating that employer data was not available for these students.

Two basic survey questionnaires were developed to collect program evaluation data in addition to the earnings data obtained from the Unemployment Division of the Florida State Department of Commerce.

A "Survey of Former Students" was designed in two forms (See Appendix A). Form A was used for former students with predetermined employer address information obtained from the Florida Department of Commerce or a previous graduate survey. Form A provided spaces for a

computer-generated student and employer name and address labels. Form B of the "Survey of Former Students" was a modification of Form A and was designed for use with those former students without current employer address information on file. Thus, Form B was designed to collect this employer data. Both surveys were mailed on November 22, 1974, with a follow-up reminder on December 6, and a final return date of December 16 indicated on the questionnaires. Figures 2 and 3 illustrate the procedures followed, the actual number of students surveyed and the forms returned from the Form A and Form B Groups.

The combined totals from both groups indicated a survey mailout to a total of 2,039 students with a total of 633 or 31 percent of the surveys returned by the Post Office as undeliverable, leaving a balance of 1,406 potential student respondents. This balance was comprised of 956 students from the Form A Group and 450 from the Form B Group. In terms of percentages, the response rate for the Form A Group was 43 percent (414 respondents), compared with 34 percent (155 respondents) for the Form B Group. Of the combined total of 1,406 potential respondents, 569 or 40 percent returned the survey.

A statement on the Form A survey indicated that implied consent to contact the employer of record would be assumed if the student had not returned the questionnaire by the specified date. This technique provided a basis for contacting employers of the students in the Form A Group who did not return the student survey and whose

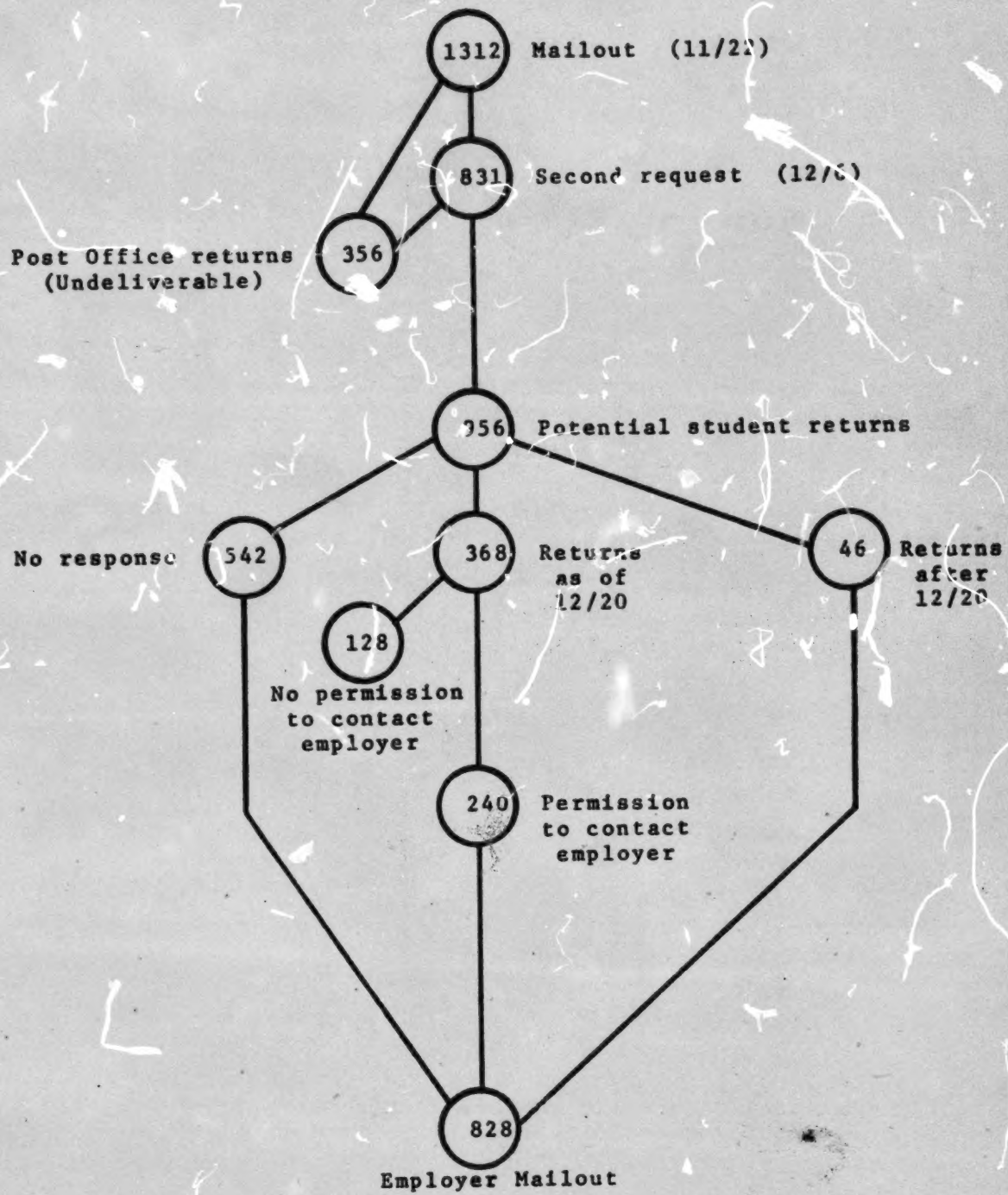
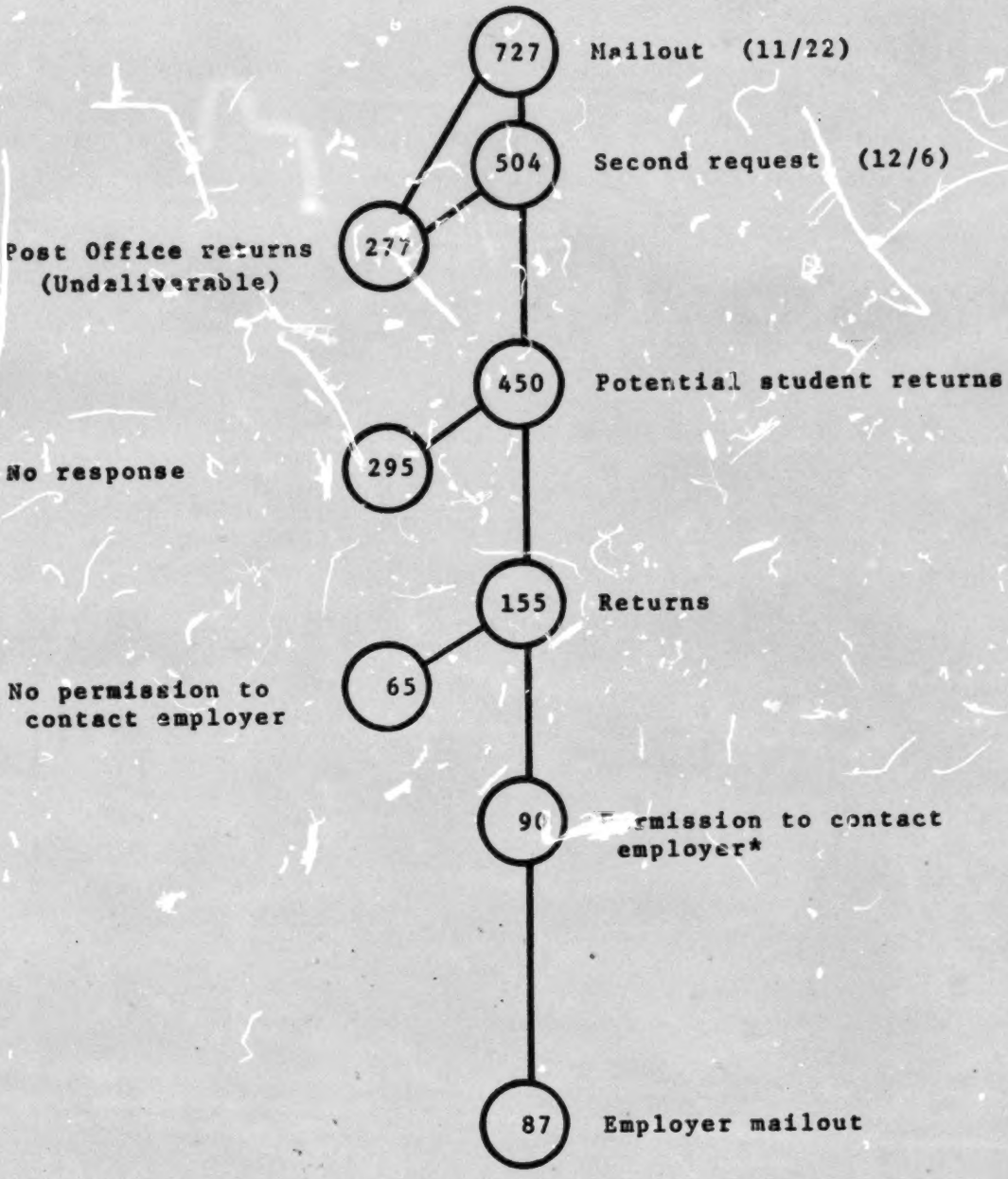


Figure 2--"Survey of Former Students," Form A Group, mailout and returns.



*Includes 3 positive responses which were received after the cutoff for the employer questionnaire mailout.

Figure 3--"Survey of Former Students," Form B Group, mailout and returns.

surveys were not returned by the Post Office as undeliverable. On the basis of the implied consent, plus the returns from students in Groups A and B with expressed permission to contact employers, a total of 915 employers were surveyed.

The number of employers surveyed represented 65 percent of the 1,406 students whose employers, if any, might potentially have been surveyed on the basis of available employer names and addresses. Figure 4 illustrates the procedures used and the rate of return of the "Employer Survey."

Of the 915 surveys mailed to the employers, 14 (1.5%) were undeliverable. Of the 901 potential employer returns, 648 (72%) were returned.

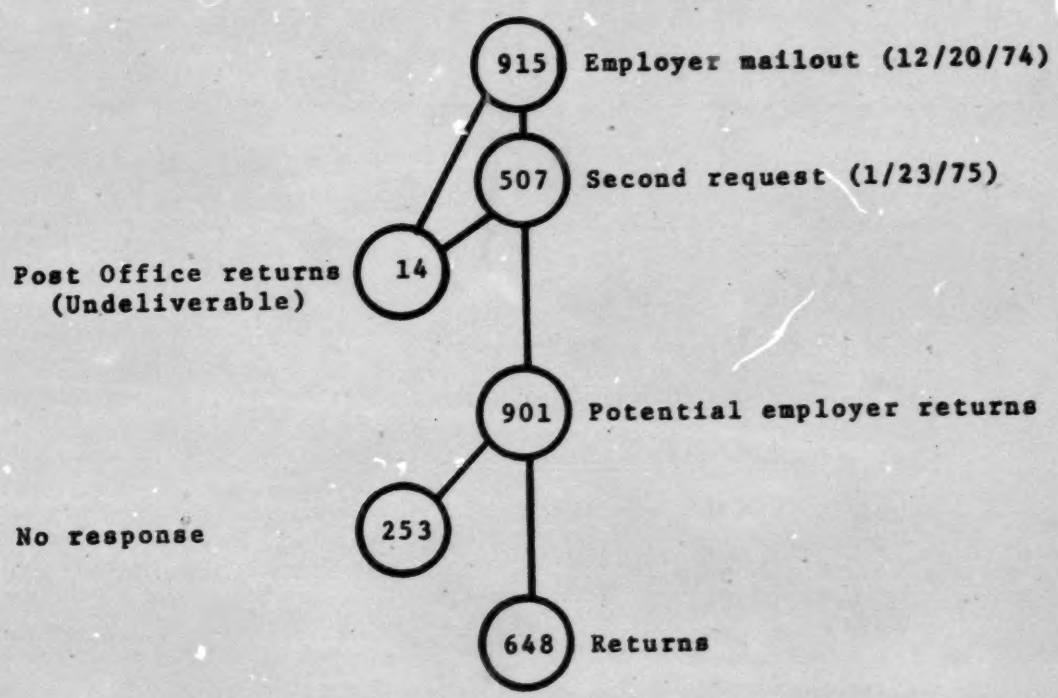


Figure 4--"Employer Survey," mailout and returns.

Section 3

RESULTS

Description of the Sample

Figure 5, page 13, illustrates the characteristics of the 2,039 students to whom this study was addressed. From Figure 5 it is noted that: (1) the population was predominately male (66.4%); (2) the largest age group was the 16-20 year olds, followed closely by the 21-25 year olds; (3) over three-fourths (77.8%) were Dade County residents at the time of registration; and (4) an almost equal proportion (78.8%) were U. S. citizens. A further description of the sample in terms of the distribution of students by program is provided in Appendix E.

Results

In interpreting the following results, it is well to keep in mind that these are based on responses from students who have completed from one course to several terms. Distribution of the 569 respondents by the credits earned is shown in Appendix F.

Table 1, page 14, displays a summary of all responses to the "Survey of Former Students." This table reports the number of former M-DCC students responding to each survey item and the precentage response distribution based on the total number responding to a given item. Although a total of 569 former students returned their survey questionnaires, the number of responses to individual items varied considerably. Of the items common to both Form A and Form B, the number of students responding to individual

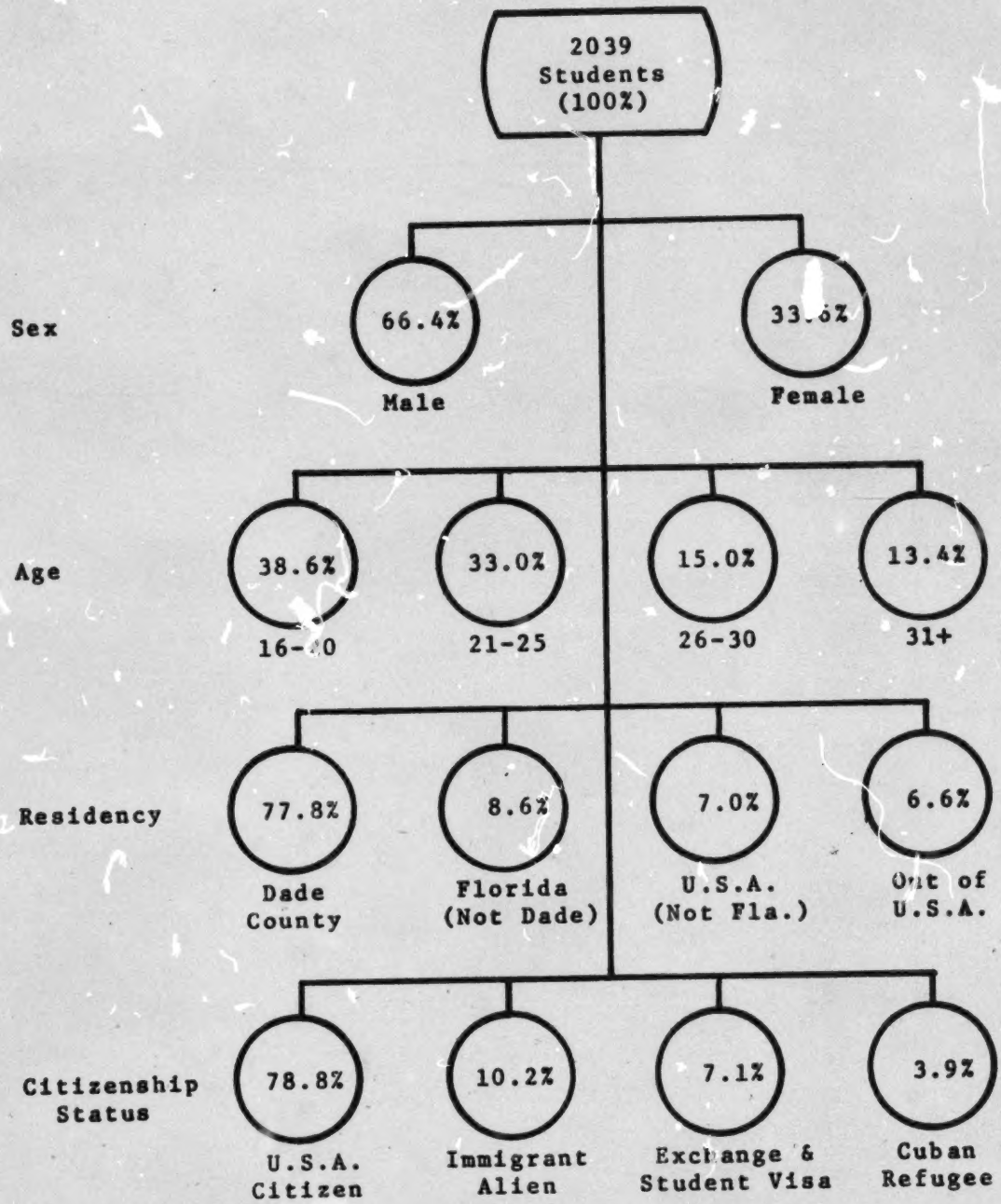


Figure 5--Survey population characteristics.

TABLE 1. Summary of all responses to the "Survey of Former Students"
Note: All percentages are based on number of former students responding to a given item.

Item 1A. May we have your permission to contact the employer named on the address label below about your program at M-DCC?

	yes	no	total responding
N	229	104	333
%	68.8	31.2	100.0

Item 1B. May we have your permission to contact your present employer (or most recent employer if currently unemployed)?

	yes	no	total responding
N	97	25	122
%	79.5	20.5	100.0

Item 2A. Are you still employed by the organization shown on the label?

	yes	no	total responding
N	223	151	374
%	59.6	40.4	100.0

May we have your permission to contact the employer you indicated above (if different than the address label)?

	yes	no	total responding
N	125	55	180
%	69.4	30.6	100.0

Item 3. What is your present status? (Mark all the boxes that apply to you)
Percentages for this item sum to more than 100.0 because of multiple responses.

	employed full-time	employed part-time	unemployed and looking for work	unemployed and not looking for work
N	410	37	36	17
%	77.2	7.0	6.8	3.2

	full-time homemaker	in military service	continuing school full-time	continuing school part-time	other
N	18	7	64	69	15
%	3.4	1.3	12.1	13.0	2.8

Item 4. How would you describe the relationship between your present job and your career program at M-DCC?

	program directly related to job	program somewhat related to job	program only slightly related to job	program not at all related to job
N	146	119	76	140
%	30.4	24.7	15.8	29.1

If you marked Box 4 above (program not at all related to job), what influenced your decision to take a job unrelated to your program?
Percentages for this item sum to more than 100.0 because of multiple responses.

	unable to get a related job	not willing to leave this area	higher salary	self-satisfaction	decided to enter another field for other reasons
N	52	5	35	26	37
%	37.1	3.6	25.0	18.6	26.4

Items 5 thru 10 are statements which might describe how your career program at M-DCC has helped you. Please react to these statements by marking the boxes according to the following scale:

			strongly agree	agree	disagree	strongly disagree
Item 5.	I had a better chance of being employed.	N	163	199	78	28
		%	34.0	42.5	16.7	6.0
Item 6.	I had a better chance of getting into the field that I wanted.	N	141	185	107	35
		%	30.1	39.5	22.9	7.5
Item 7.	I have had more opportunity for job promotion.	N	103	193	131	42
		%	22.0	41.1	27.9	9.0
Item 8.	I have been able to perform job tasks requiring a higher level of skills.	N	116	226	100	26
		%	24.8	48.2	21.4	5.6
Item 9.	I am earning a higher salary.	N	88	177	131	60
		%	19.3	38.8	28.7	13.2
Item 10.	I am more satisfied with my job.	N	120	187	99	42
		%	26.8	41.7	22.1	9.4

Please rate the following aspects of your career program at M-DCC by marking the boxes according to the following scale:

			excellent	good	fair	poor
Item 11.	Quality of instruction.	N	171	256	67	11
		%	33.9	50.6	13.3	2.2
Item 12.	Facilities and equipment.	N	244	209	52	7
		%	47.6	40.8	10.2	1.4
Item 13.	Coverage of skills needed for job.	N	101	237	128	32
		%	20.3	47.6	25.7	6.4
Item 14.	Coverage of knowledge needed for job.	N	108	241	120	29
		%	21.7	48.4	24.1	5.8
Item 15.	Emphasis on practical applications.	N	90	214	136	61
		%	18.0	42.7	27.1	12.2

Item 16. Before enrolling for my career program at M-DCC, I had

	never worked	never worked at a job related to my career program
N	42	267
%	9.0	57.9

Worked at a job related to my career program:

	for less than a year	for a year or more
N	50	128
%	10.7	27.4

items ranged from 448 to 531.

Item 1 appeared somewhat differently on the two student questionnaires (Form A and Form B), but these items are identified in Table 1 by Items 1A and 1B. Similarly, Item 2A contains only data from the Form A Group respondents.

Seventy-two percent of the students responding gave M-DCC permission to contact their employers regarding their former career occupational programs. Item 3 reflects the employment status of respondents during the survey period November--December, 1974. This was a period when Florida unemployment rates ranged from 7.1 to 8.3 percent.

Respondents in jobs from slightly related to directly related to their M-DCC occupational programs amounted to 71 percent, while 29 percent were in jobs unrelated to their programs. Over one-third (37%) of those in unrelated jobs said they were "out-of-field" because they were unable to get a related job.

Two-thirds to over three-fourths of the respondents indicated a positive feeling about the degree to which their M-DCC career program had helped them in their employment opportunities and job satisfaction.

The quality of instruction at M-DCC was given a very positive assessment with 85 percent of the responding former students indicating an excellent or good rating. Thirty-nine percent gave a poor or fair rating to "emphasis on practical applications in their program."

Slightly more than half (53%) of these former students

had never worked at a job related to their career program prior to their enrollment at M-DCC. Of those having previous jobs with related work experience, 28 percent worked at these jobs for less than a year and 72 percent for more than a year.

Of the 569 survey returns, 349 former M-DCC students responded to Items 17 and/or 18 with written comments. Following is a synopsis and interpretation of those comments:

81 (14.2%) former students suggested that courses should be added, dropped, or changed in various departments of the College.

78 (13.7%) students felt that M-DCC was A-OK.

73 (12.8%) students felt quite strongly that there was a definite need for additional practical knowledge and/or applications regarding their career fields.

18 (3.2%) students felt that their instruction and/or instructors could have been improved.

16 (2.8%) students felt that their career counseling could have been improved in the areas of potential salary and/or job availability.

15 (2.6%) students felt that their required curricula outside their career program was either a waste of time or nonrelevant; i.e., they felt that they were only attending to improve their employment skills in their chosen programs.

12 (2.1%) students expressed a definite desire for an internship program or related on-the-job training.

10 (1.8%) students commented that they could not secure related employment. Some felt that M-DCC was training far more students than employment demands would indicate a need for in a given field.

4 students indicated that they wished not to be bothered!

2 students felt that a complete new program was needed.

Only one student responded with, "My career program was poor."

Several respondents indicated the feeling that even though they were not presently employed in a field related to their career program, they nevertheless received beneficial training and qualifications that helped them secure satisfactory employment.

Numerous students made comments at the bottom of the questionnaire near the THANK YOU FOR YOUR COOPERATION, such as, "You are welcome," "Thank you for letting me respond," and "Thank you for this opportunity."

Copies of these comments will be made available to the appropriate program directors for their consideration.

Table 2 displays a summary of responses to the "Employer Survey" from 605 employers. All, except 53, employers either were currently or formerly employers of M-DCC students (graduates or non-graduates) at the time of the survey administration.

Very positive ratings were given to the academic and career preparation of former M-DCC students. Three-fourths to 86 percent of the employer ratings were either excellent or good. Highest marks were given to "ability to get along with others" and "ability to communicate with others." The lowest mark was given to "performance of job skills from the beginning of employment" with one-fourth of the employers rating the item fair or poor.

Of the 648 employer survey returns, approximately one-third responded to Items 10, 11 and 12 requesting comments about M-DCC programs. These comments ranged from an extremely favorable reaction to the programs, to constructive criticism, to a few negative comments about certain programs. The following is a synopsis of

TABLE 2. Summary of all responses to the "Employer Survey"
Note: All percentages are based on number of employers responding to a given item, but in addition, the percentage base for items 3 thru 9 does not include "does not apply" responses.

Item 1. Is the person whose name appears on the label below presently in your employ?

	yes	no	total responding
N	365	240	605
%	60.3	39.7	100.0

Item 2. If no, was this person ever employed by your organization?

	yes	no	total responding
N	183	53	236
%	77.5	22.5	100.0

Within your own supervisory experience, please indicate your rating of this person's preparation at Miami-Dade Community College by marking the boxes according to the following scale:

			excellent	good	fair	poor	does not apply
Item 3.	Depth of knowledge in the various areas required by the job.	N	122	225	71	20	31
		%	27.9	51.3	16.2	4.6	
Item 4.	Understanding of the theory behind the tasks performed.	N	127	219	78	22	26
		%	28.5	49.1	17.5	4.9	
Item 5.	Performance of job skills from the beginning of employment.	N	120	213	99	13	25
		%	27.0	47.9	22.2	2.9	
Item 6.	Familiarity with any equipment required by the job, from the beginning of employment.	N	127	212	71	23	33
		%	29.3	49.0	16.4	5.3	
Item 7.	Range of knowledge required by the job.	N	120	221	85	16	28
		%	27.1	50.1	19.2	3.6	
Item 8.	Ability to communicate with others.	N	167	205	58	26	19
		%	36.6	45.0	12.7	5.7	
Item 9.	Ability to get along with co-workers.	N	201	189	52	13	17
		%	44.2	41.5	11.4	2.9	

these generalized comments.

52 (8.0%) employers responded that the present employment of the former student did not relate at all to their career training at M-DCC.

30 (4.6%) employers felt that the employment preparation was very satisfactory with a typical comment such as: "Your graduates have proven to be some of the best employees in our Research and Development Department. My compliments to your staff."

22 (3.4%) employers felt that both additional written and verbal communication skill training would be beneficial.

15 (2.3%) employers felt that a more realistic (less theoretical) approach to the real work would be advantageous.

8 (1.2%) employers felt that human relations and inter-personal relationships should be stressed with a typical comment such as: "Stress should be placed upon ability to get along with both other employees and the company. A person can be an ace pilot, but have the personality of an alligator and no one wants him around. I do find that there are too many employees who just have a 'give me' and 'to hell with you' attitude."

6 (0.9%) employers stated that the former students were only temporary employees, while attending M-DCC, and felt it was unfair to evaluate them on their program.

Several employers stressed the need for on-the-job training and/or an internship program to give the students a better understanding of what the job requirements would be.

Numerous employers also felt that within the classroom experiences, the students could benefit greatly from more job-related training.

Employers of civil service types felt that emphasis should be added in a community involvement program for their prospective employees.

A few of the employers felt that a more concentrated basic math program was needed.

Less frequent comments from employers included suggestions that the College provide:

- Job estimating and job bidding training
- Uniformity between classes and/or instructors in the same course
- More laboratory experiences
- Updated curriculum material
- Information on proper dress for interviews
- More skills practice
- Mandatory counseling for career planning
- Accident investigation
- More stress on organizational management

Copies of these comments will be made available to the appropriate program directors for their consideration.

Table 3 summarizes extrapolated median annual salaries of former students by career program for those programs on which these data were available for 20 or more students and for the total group of students on whom these data were available. The note in the heading of Table 3 explains the method of extrapolating salaries. Highest median annual earnings were made by former students of Police Science and Criminology ($11,315), Electronics Technology ($9,863), and Air Conditioning and Refrigeration Technology ($9,256). These median incomes were earned less than two years after leaving Miami-Dade Community College.

Although it was felt that a sample size of less than 20 students was not a large enough sample to be representative of a given program, it is worthy to note that 5 students in Building and Construction Technology had an

TABLE 3. Summary of median annual earnings of former students currently employed

Note: Data is shown by program of study for those programs having 20 or more students with earnings information. Estimates of annual earnings were computed for each former student having 1974 second quarter income data by extrapolating in the following manner:

$$\text{Estimated annual earnings} = \frac{\text{earnings}}{\text{weeks worked}} \times 52$$

Program Code	Program	Median Annual Earnings	Number of Students Having Earnings Data
84	Police Science and Criminology	$11,315	119
56	Electronics Technology	9,803	43
52	Air Conditioning & Refrigeration Technology	9,256	27
81	Marketing	8,727	21
90	Aviation Administration	8,431	39
77	Business Administration	8,335	54
66	Flight Pilot	8,026	46
69	Radio/Television Broadcasting Technology	7,627	23
62	Mortuary Science	7,567	41
55	Electronic Data Processing Programming	7,355	55
76	Accounting	7,243	68
86	Secretarial Science	6,463	117
87	Interior Design	5,777	27
78	Fashion Design	5,759	29
	All Other Programs	7,871	262
	TOTAL	7,862	971

extrapolated median salary of $16,744; 11 former students of Fire Science Technology had a salary of $15,301; 17 former students of Management and Supervision had a salary of $13,863; and 5 former students in Electrical Distribution had a salary of $12,067.

Table 4, Appendix C, pages 40 to 51, presents a series of tabulations yielding detailed item analyses of responses from former students by career program. Breakouts in Table 4 are by graduates and non-graduates and by sex-age groupings. Only those programs with 20 or more respondents are reported in Table 4.

Table 5, Appendix D, pages 53 to 55, also presents a series of tables yielding a detailed item analysis by item across career programs. Only those programs with 20 or more respondents are reported in Table 5.

The following observations are presented as answers to the eight questions posed by this study in Section 1.

1. Former students gave high ratings to their preparation for employment as a result of their educational program at Miami-Dade Community College.

   84.5% of the student respondents rate the quality of instruction good or excellent.

   88.4% of the respondents rate the facilities and equipment good or excellent.

   70.1% of the respondents rate the coverage of knowledge needed for the job good or excellent.

   67.9% of the respondents rate the coverage of skills needed for the job good or excellent.

   60.7% of the respondents rate the emphasis on practical applications good or excellent.

2. Employers of former students also gave high ratings to the College's efforts to prepare students for employment.

   85.7% of the employer respondents rate the ability to get along with co-workers good or excellent.

   81.6% of the respondents rate the ability to communicate with others good or excellent.

   79.2% of the respondents rate the depth of knowledge in the various areas required by the job good or excellent.

   78.3% of the respondents rate the familiarity with any equipment required by the job, from the beginning of employment good or excellent.

   77.6% of the respondents rate the understanding of theory behind the tasks performed good or excellent.

   77.2% of the respondents rate the range of knowledge required by the job good or excellent.

   74.9% of the respondents rate the performance of job skills from the beginning of employment good or excellent.

3. Career occupational students felt that their College program aided them significantly in terms of securing employment, promotional opportunities, and job satisfaction. As a result of their career program at M-DCC:

   77.3% of the student respondents had a better chance of being employed.

   68.5% of the respondents were more satisfied with their job.

   63.1% of the respondents had more job opportunity for promotion.

4. Extrapolated income levels achieved by former students one year after leaving Miami-Dade Community College ranged from $5,631 to $15,301 annually. Table 3, page 21, reports these median annual salaries of former students from 14 career programs. Those median salaries reported had at least 20 former student earnings records per occupational program available in order to be included in the tabulation.

5. Extrapolated median income levels of program graduates were higher in some instances than non-graduates and lower in others. Median income levels were higher for program graduates of Secretarial Science, Mortuary Science, Electronic Data Processing, Electronics Technology, and Radio and TV Broadcast Technology.

   Non-graduates had higher median annual salaries in the fields of Police Science and Criminology, Accounting, Pilot (Flight) Program, Aviation Administration, and Fashion Design. Income differentials among former students, while somewhat informative, should be viewed with the limitations inherent in their calculation.

   Graduates reported slightly higher job satisfaction than did non-graduates. 75.6% of the program graduates responding agreed they were more satisfied with their job as a result of their M-DCC program vs. 71.9% of the non-graduates' response to this item.

6. Full-time or part-time employment was achieved by 83.8% of the student respondents with over half (55.1%) employed in a job at least somewhat related to their career program.

7. A number of former students indicated that they were involved in activities other than full or part-time employment. Some of the respondents indicated that they were involved in these activities in addition to full or part-time employment.

   Of those responding:

   13.0% were continuing school part-time.

   12.1% were continuing school full-time.

   6.8% were unemployed and looking for work.

   3.4% were full-time homemakers.

   3.2% were unemployed and not looking for work.

   1.7% were in military service.

8. Responses from former students who had taken a limited number of courses (30 credits or less) were also positive about the extent to which their occupational programs helped them in their careers.

67.7% of these respondents had a better chance of being employed.

60.4% of these respondents were able to perform job tasks requiring a higher level of skills.

58.9% of these respondents had a better chance of getting into the field they wanted.

55.6% of these respondents were more satisfied with their job.

51.9% of these respondents had more opportunity for job promotion.

43.4% of these respondents were earning a higher salary.

Section 4

SUMMARY AND CONCLUSIONS

Briefly stated, this study was intended as a pilot project to design a method and system for collecting, analyzing, and reporting information about the degree to which students in career occupational educational programs achieve their objectives of attaining marketable skills for employment. Other purposes of the study were described in more detail in the form of a series of questions that might be asked in evaluating the outcomes of these educational programs. Questionnaires were carefully designed to obtain information and ratings from former students and their employers in a relatively straightforward and objective manner. A computer system was designed and developed to facilitate questionnaire distribution by mail and the analysis of responses in conjunction with other data extracted from the College student records systems and earnings data obtained from the Florida Department of Commerce.

In addition to the earnings data for which the Florida Department of Commerce was the sole source, it is also worthy of note that this source provided 90 percent of all employer names and addresses of former students that were available for this study. Furthermore, on those student survey questionnaires that included employer names and addresses (Form A), a 30 percent higher response rate was achieved. These observations illustrate the tremendous contribution made to this study by the

availability of these hard factual data.

The results support the conclusion that the study was successful in obtaining the types of information needed for evaluation of the College programs in occupational education, within the limits imposed by a system of mail contacts and response rates. Furthermore, the results reflected favorably on the College program in that a majority of the former students were able to obtain full-time employment in a job related to their educational program. Favorable ratings were also reported for the contributions of the College program in providing necessary knowledge and skills for job performance, promotion, higher salaries, and job satisfaction. Both former students and their employers favorably rated such aspects of the College program as quality of instruction, facilities and equipment, and coverage of requisite knowledge, skills, and practical applications.

A review of the results of this study revealed the need for additional analyses. Other interesting questions were considered in the original planning for the study but had to be excluded from consideration in order to restrict this study to a scope that was manageable within the time frame and resources available. Data from the present study is being retained for further analysis.

Among the questions that might be answered by further analysis of the data from the current study are these: 1) What is the relationship between academic achievement in terms of credits and grades earned and success in

employment, including earning levels? 2) To what extent were the favorable results attributable to such student characteristics as age, or to factors external to the College program such as work experience prior to or concurrent with enrollment?

One disconcerting finding in this study was that graduates in some programs were earning lower salaries than non-graduates. Certainly, this raises some intriguing questions for further research but, at this point, any suggested answers would fall within the realm of speculation.

Further research is needed to determine the degree to which the results obtained in this study would change over a longer period of follow-up. It is suggested that the one or two-year period of follow-up covered in this study has not provided sufficient time for all of the former students to realize or capitalize upon their potential for advancement. Furthermore, to some degree the knowledge and skills gained in some programs cannot be fully utilized in entry level positions which some former students might occupy. Thus, with more experience and advancement, former students may report an even greater appreciation of the value of the educational program, on the one hand, or be more likely to make suggestions about needed improvements, on the other hand.

In conclusion, it is appropriate to end with some comments about survey research that might not otherwise be apparent. Definitive research requires not only careful

planning and the allocation of adequate resources for support services, but also an adequate time span in which to collect and analyze the data and report the results. There is a certain minimum below which the time span cannot be reduced without restricting the results below a meaningful level. Also, while adequate survey research requires adequate resources, the allocation of additional resources will reach a point of diminishing return. There are constraints imposed by student mobility and response rate that must be recognized in setting reasonable goals for reporting program outcomes. An increase in the number of surveys sent to students and their employers will tend to reduce the response rate. Therefore, follow-up studies should be carefully planned and coordinated.

Appendix A

FORMER STUDENT SURVEY FORMS A AND B

FORM A

Office of Institutional Research
MIAMI-DADE COMMUNITY COLLEGE
Survey of Former Students

If the address shown on the label below is incorrect, please indicate your current address in the space provided:

STUDENT NAME & ADDRESS LABEL

Name

Address

City & State

Dear Former Student:

We are conducting a follow-up study of students who were in attendance at Miami-Dade Community College during the 1972-73 academic year. The information that you provide us will be of great value in improving present programs and planning new ones. As a former student, your activities and opinions are among the most valuable inputs we will receive.

Employers of former students are also in a unique position to assist the College in evaluating its programs. Therefore, as a part of this survey, we would like your permission to contact your employer as shown in Item 1 below.

Please be assured that the sole purpose of this follow-up is to obtain information that will be useful in improving college career programs. Individual replies will be confidential and will not become a part of your student records. Neither you nor your employer will be identified in the final report of this study.

Please complete the items on both sides of this survey and return it in the enclosed envelope by December 16th.

If you have any questions about this survey, please feel free to call 274-1238.

Sincerely,

Peter Masiko, Jr.
President

---

1. May we have your permission to contact the employer named on the address label below about your program at M-DCC?
   [1] yes [2] no

If employer address on the label is not where you actually work, please indicate work location address.

EMPLOYER NAME & ADDRESS LABEL

NOTE: If we do not receive your reply to this survey by December 16th, we will assume that we have your permission to contact your employer.

2. Are you still employed by the organization shown on the label?
   [1] yes Please indicate your job title and go to Item 3: _____
   [2] no Please indicate new employer if you have taken another job.

Organization: _____

Address: _____

Your present job title: _____

May we have your permission to contact the employer you indicated above?
[1] yes [2] no

3. What is your present status? (Mark all the boxes that apply to you.)

[1] Employed full-time
[2] Employed part-time
[3] Unemployed and looking for work
[4] Unemployed and not looking for work
[5] Full-time homemaker
[6] In military service
[7] Continuing school full-time
[8] Continuing school part-time
School _____
City & State _____
[9] Other (please specify) _____

4. How would you describe the relationship between your present job and your career program at M-DCC?

[1] Program directly related to job
[2] Program somewhat related to job
[3] Program only slightly related to job
[4] Program not at all related to job

If you marked Box 4 above, what factors influenced your decision to take a job unrelated to your program?

[1] Unable to get a related job
[2] Not willing to leave this area
[3] Higher salary
[4] Self satisfaction
[5] Decided to enter another field for other reasons

(Use Item 18 for comments or explanations.)

Items 5 thru 10 are statements which might describe how your career program at M-DCC has helped you. Please react to these statements by marking the boxes according to the following scale:

[1] strongly agree [2] agree [3] disagree [4] strongly disagree

5. [1] [2] [3] [4] I had a better chance of being employed.
6. [1] [2] [3] [4] I had a better chance of getting into the field that I wanted.
7. [1] [2] [3] [4] I have had more opportunity for job promotion.
8. [1] [2] [3] [4] I have been able to perform job tasks requiring a higher levels of skills.
9. [1] [2] [3] [4] I am earning a higher salary.
10. [1] [2] [3] [4] I am more satisfied with my job.

Please rate the following aspects of your career program at M-DCC by marking the boxes according to the following scale:

[1] excellent [2] good [3] fair [4] poor

11. [1] [2] [3] [4] Quality of instruction
12. [1] [2] [3] [4] Facilities and equipment
13. [1] [2] [3] [4] Coverage of skills needed for job
14. [1] [2] [3] [4] Coverage of knowledge needed for job
15. [1] [2] [3] [4] Emphasis on practical applications

16. Before enrolling for my career program at M-DCC, I had:

[1] Never worked
[2] Never worked at a job related to my career program

Worked at a job related to my career program:

[3] For less than a year
[4] For a year or more

17. In reviewing your career program at M-DCC, please comment on skills or areas of knowledge that should be added, strengthened or eliminated.

_____
_____
_____

18. Do you have any additional comments or suggestions about your career program and how it relates to your present job?

_____
_____
_____

THANK YOU FOR YOUR COOPERATION!

FORM B

Office of Institutional Research
MIAMI-DADE COMMUNITY COLLEGE
Survey of Former Students

If the address shown on the label below is incorrect, please indicate your current address in the space provided:

STUDENT NAME & ADDRESS LABEL

Name

Address

City & State

Dear Former Student:

We are conducting a follow-up of students who were in attendance at Miami-Dade Community College during the 1972-73 academic year. The information that you provide us will be of great value in improving present programs and planning new ones. As a former student, your activities and opinions are among the most valuable inputs we will receive.

Employers of former students are also in a unique position to assist the College in evaluating its programs. Therefore, as a part of this survey, we would like your permission to contact your employer.

Please be assured that the sole purpose of this follow-up is to obtain information that will be useful in improving college career programs. Individual replies will be confidential and will not become a part of your student records. Neither you nor your employer will be identified in the final report of this study.

Please complete the items on both sides of this survey and return it in the enclosed envelope by December 18th.

If you have any questions about this survey, please feel free to call 274-1238.

Sincerely,

Peter Masiko, Jr.

Peter Masiko, Jr.
President

- - - -

4. How would you describe the relationship between your present job and your career program at M-DCC?

[1] Program directly related to job
[2] Program somewhat related to job
[3] Program only slightly related to job
[4] Program not at all related to job

If you marked Box 4 above, what factors influenced your decision to take a job unrelated to your program?

[1] Unable to get a related job
[2] Not willing to leave this area
[3] Higher salary
[4] Self satisfaction
[5] Decided to enter another field for other reasons

(Use Item 18 for comments or explanations.)

Items 5 thru 10 are statements which might describe how your career program at M-DCC has helped you. Please react to these statements by marking the boxes according to the following scale:

[1] strongly agree [2] agree [3] disagree [4] strongly disagree

5. [1] [2] [3] [4] I had a better chance of being employed.
6. [1] [2] [3] [4] I had a better chance of getting into the field that I wanted.
7. [1] [2] [3] [4] I have had more opportunity for job promotion.
8. [1] [2] [3] [4] I have been able to perform job tasks requiring a higher level of skills.
9. [1] [2] [3] [4] I am earning a higher salary.
10. [1] [2] [3] [4] I am more satisfied with my job.

Please rate the following aspects of your career program at M-DCC by marking the boxes according to the following scale:

[1] excellent [2] good [3] fair [4] poor

11. [1] [2] [3] [4] Quality of instruction
12. [1] [2] [3] [4] Facilities and equipment
13. [1] [2] [3] [4] Coverage of skills needed for job
14. [1] [2] [3] [4] Coverage of knowledge needed for job
15. [1] [2] [3] [4] Emphasis on practical applications

16. Before enrolling for my career program at M-DCC, I had:

[1] Never worked
[2] Never worked at a job related to my career program

Worked at a job related to my career program:

[3] For less than a year
[4] For a year or more

17. In reviewing your career program at M-DCC, please comment on skills or areas of knowledge that should be added, strengthened or eliminated. _____

_____

_____

18. Do you have any additional comments or suggestions about your career program and how it relates to your present job?

_____

_____

_____

THANK YOU FOR YOUR COOPERATION!

Appendix B

EMPLOYER SURVEY

CONFIDENTIAL

Office of Institutional Research
MIAMI-DADE COMMUNITY COLLEGE
Employer Survey

EMPLOYER NAME & ADDRESS LABEL

Gentlemen:

We are conducting a follow-up study of students who were in attendance at Miami-Dade Community College during the 1972-73 academic year. The information that you provide us will be of great value in improving present programs and planning new ones. As an employer of a former student, your opinions are among the most valuable inputs we will receive.

Please have the immediate or other appropriate supervisor provide information regarding the employee whose name appears on the label below. Permission from the employee has been granted to request this information. The results of this survey will be used in evaluating career programs offered by Miami-Dade Community College. The information which we are requesting will be held in strict confidence. Neither you, the employee, nor your organization will be identified in the final report of this study.

Your cooperation in completing both sides of this survey and promptly returning it in the enclosed envelope will be greatly appreciated. If you have any questions about this survey, please feel free to call 274-1238.

Sincerely,

Peter Masiko, Jr.

Peter Masiko, Jr.
President

---

1. Is the person whose name appears on the label below presently in your employ?
   [1] yes [2] no

STUDENT NAME & ADDRESS LABEL

2. If no, was this person ever employed by your organization?
   [1] yes [2] no (If no, go to Item 12)

Within your own supervisory experience, please indicate your rating of this person's preparation at Miami-Dade Community College by marking the boxes according to the following scale:

	[1] excellent		[2] good		[3] fair	[4] poor	[5] does not apply
3.	[1]	[2]	[3]	[4]	[5]		Depth of knowledge in the various areas required by the job
4.	[1]	[2]	[3]	[4]	[5]		Understanding of the theory behind the tasks performed
5.	[1]	[2]	[3]	[4]	[5]		Performance of job skills from the beginning of employment
6.	[1]	[2]	[3]	[4]	[5]		Familiarity with any equipment required by the job, from the beginning of employment
7.	[1]	[2]	[3]	[4]	[5]		Range of knowledge required by the job
8.	[1]	[2]	[3]	[4]	[5]		Ability to communicate with others
9.	[1]	[2]	[3]	[4]	[5]		Ability to get along with co-workers

10. Based on the performance of this person on the job, please comment on any SKILLS areas in the Miami-Dade career program that you feel should be added, strengthened or eliminated.

_____

_____

_____

_____

_____

11. Based on the performance of this person on the job, please comment on any areas of KNOWLEDGE in the Miami-Dade career program that you feel should be added, strengthened or eliminated.

_____

_____

_____

_____

_____

12. Please give any other suggestions for improving the career courses at Miami-Dade Community College.

_____

_____

_____

_____

THANK YOU FOR YOUR COOPERATION!

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Appendix E

ALPHABETICAL LIST OF PROGRAMS AND DISTRIBUTION OF SAMPLE STUDENTS AND QUESTIONNAIRE RESPONDENTS BY PROGRAM

TABLE 6. Alphabetical list of programs and program codes

Program	Program Code	Program	Program Code
Accounting	76	Fire Service Administration	T2
Aero Simulator Instrument/Technology	S2	Flight Attendant	67
Aeronautical Technology	51	Flight Pilot	66
Aerospace Engineering	S5	General Office Careers	83
Air Conditioning & Refrigeration Technology	52	Graphic Arts Science Technology	57
Air Traffic Control	S3	Home Economics	79
Air Traffic Control Co-operative	S4	Hotel/Restaurant/Institutional Mgmnt	S7
Architectural Technology	53	Instrumentation Technology	58
Aviation Administration	90	Interior Design	87
Banking & Finance	R9	Landscape Development	73
Building Construction Technology	64	Management & Supervision	59
Business Administration	77	Manufacturing Technology	95
Business Information Systems	71	Marine Electronics Technology	R3
Civil Engineering Technology	54	Marine Engineering Technology	R2
Commercial Art & Advertising Design	R5	Marine Survey Technology	R1
Court Reporting	75	Marketing	81
Drafting Technology	65	Meteorology Analyst	R8
Electrical Distribution Technology	70	Mortuary Science	62
Electromechanical Technology	R4	Police Science & Criminology	84
Electronic Data Processing Programming	55	Radio/TV Broadcasting Technology	68
Electronics Technology	56	Real Estate Management & Development	R6
Environmental Control Technology	S6	Recreation for the Handicapped	S1
Fashion Design	78	Recreational Leadership	85
Fashion Merchandising	S8	Secretarial Science	86
Fashion Modeling	88	Teachers Assistant	94
Fire Science Technology	T1	Transporation & Traffic Management	69

TABLE 7. Number of students in sample and student questionnaire respondents by program

Program Code	Number of Students in Sample	Number of Student Questionnaire Respondents	Program Code	Number of Students in Sample	Number of Student Questionnaire Respondents
R1	21	3	59	33	11
R2	31	1	62	81	20
R3	4	2	64	11	4
R4	5	0	65	24	5
R5	39	6	66	89	27
R6	4	1	67	14	5
R8	1	1	68	59	28
R9	7	3	69	9	1
S1	3	1	70	11	2
S2	3	0	71	6	2
S3	13	4	73	12	5
S4	2	2	75	22	8
S5	2	0	76	114	36
S6	6	2	77	122	35
S7	70	12	78	52	13
S8	18	3	79	4	1
T1	12	2	81	41	14
T2	7	2	83	30	11
51	29	8	84	275	60
52	41	15	85	16	1
53	22	8	86	199	71
54	24	6	87	76	23
55	97	28	88	18	4
56	139	29	90	70	28
57	22	7	94	15	2
58	5	1	95	9	5
			Total	2039	569

Appendix F

DISTRIBUTION OF STUDENT RESPONDENTS BY CREDITS EARNED

TABLE 8. Distribution of student respondents by credits earned

Credits Earned	Number of Students	Percent
0-11	68	12.0
12-23	63	11.1
24-35	56	9.8
36-47	40	7.0
48-59	36	6.3
60-71	198	34.8
72+	108	19.0

UNIVERSITY OF CALIF.
LOS ANGELES

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